

KIC 005200605

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
005200605-01	OBS	No	641.358213	219.486766	286.3	12.709	8.4	7.7	4.30	5395	7.83	5.11

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005200605-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

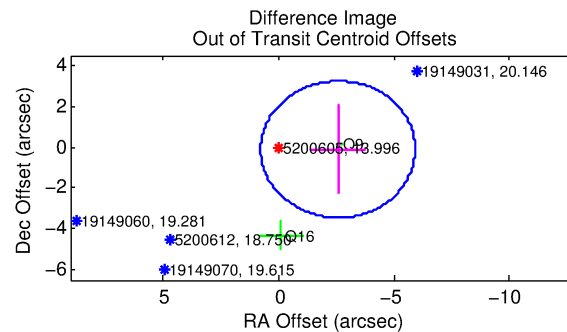
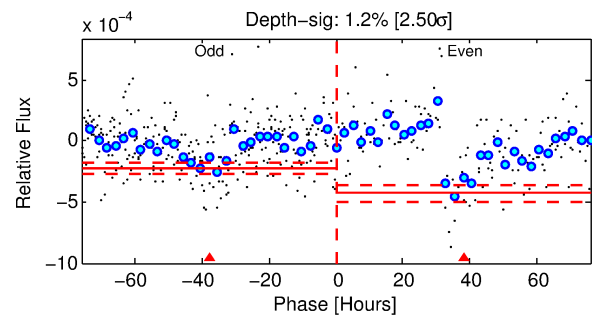
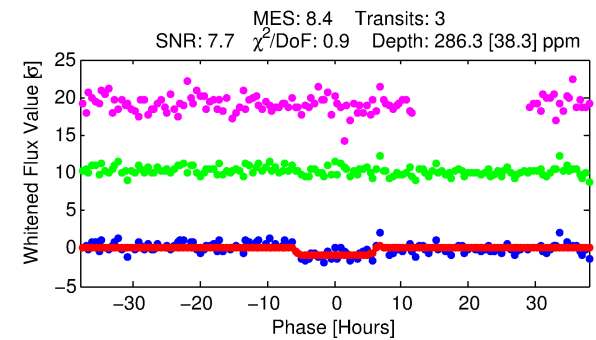
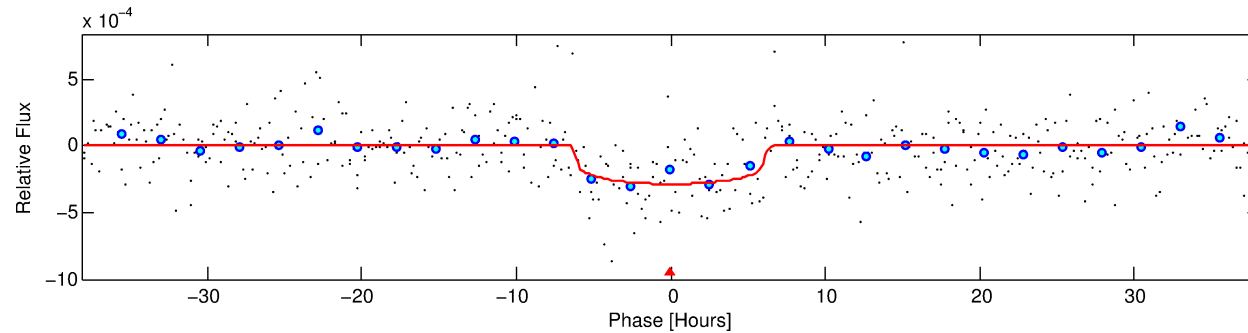
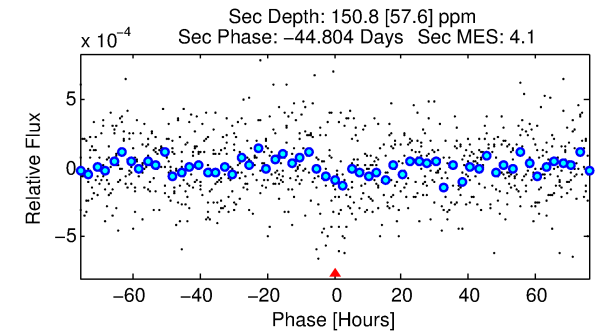
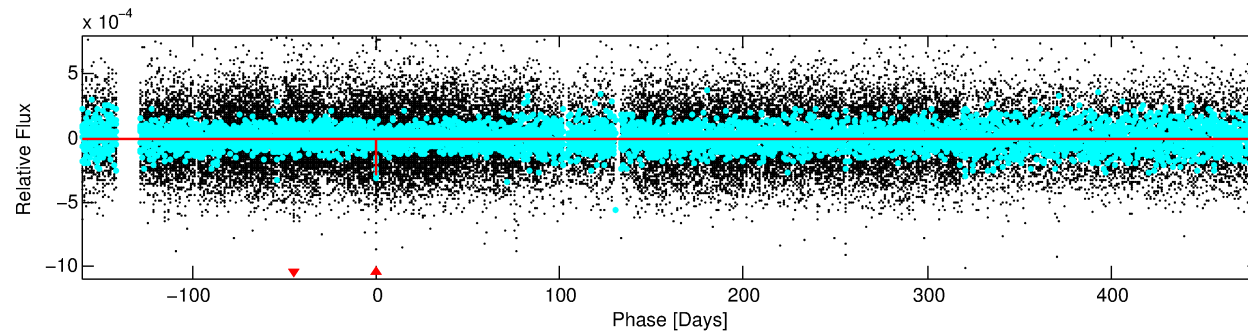
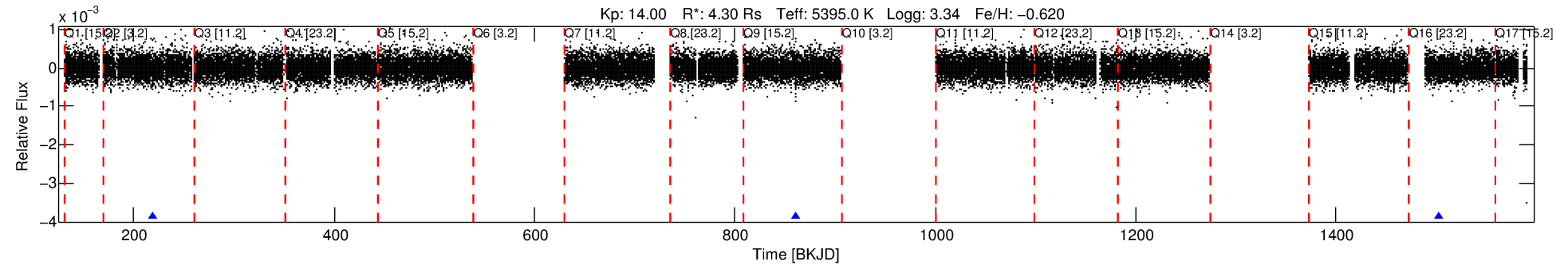
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005200605-01

No Significant Match Found

DV One-Page Summary

KIC: 5200605 Candidate: 1 of 1 Period: 641.358 d



DV Fit Results:

Period = 641.35821 [0.01298] d
Epoch = 219.4868 [0.0184] BKJD
Rp/R* = 0.0167 [0.0099]
a/R* = 274.48 [721.94]
b = 0.73 [1.73]
Seff = 5.11 [1.72]
Teff = 383 [32] K
Rp = 7.83 [5.15] Re
a = 1.6568 [0.3831] AU
Ag = 3716.18 [4801.81] [0.77σ]
Teffp = 4628 [1448] K [2.93σ]

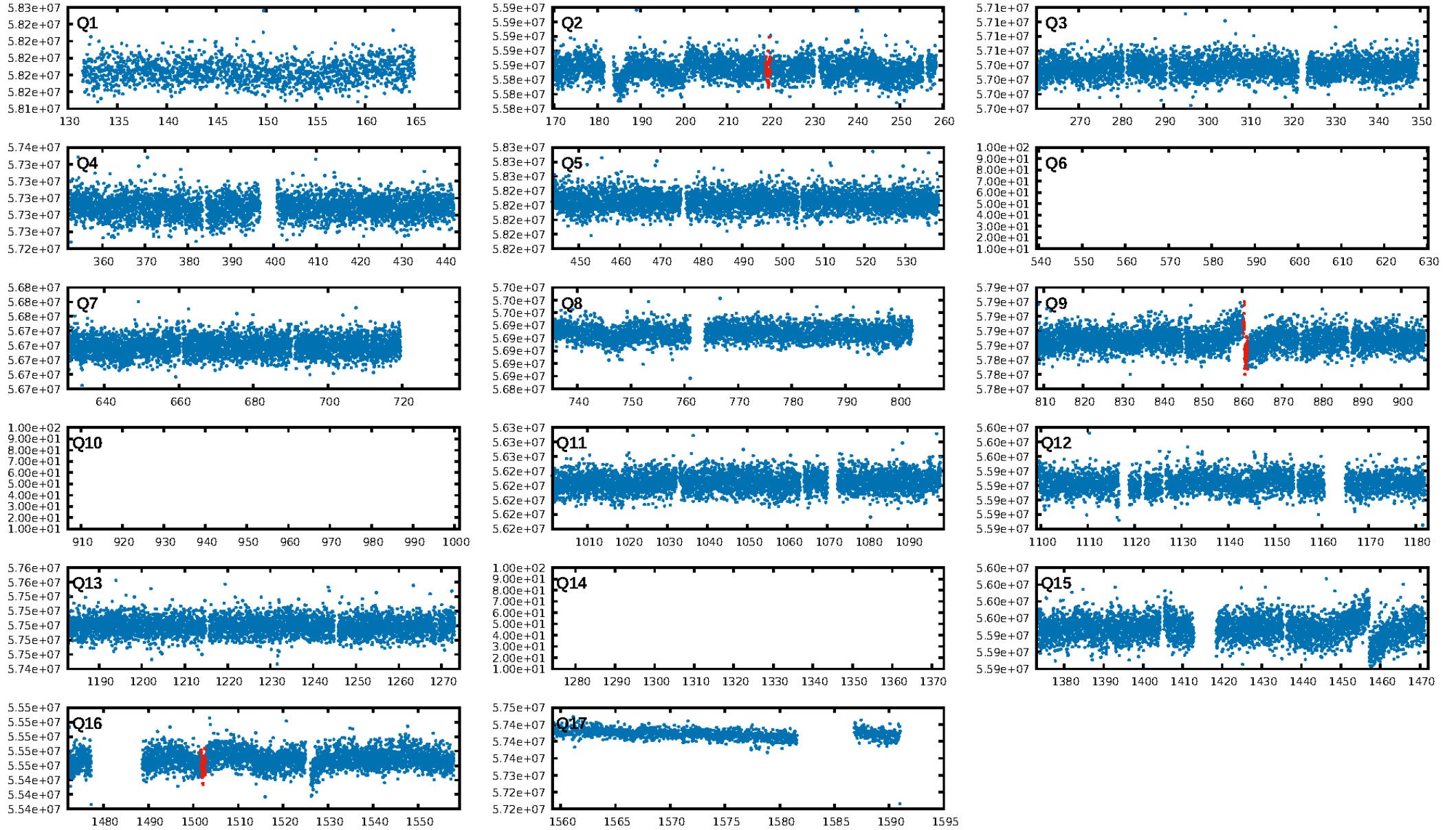
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 10.2%
ModelChiSquareGof-sig: 98.0%
Bootstrap-pfa: 3.01e-18
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -64.31
Centroid-sig: 2.1%
Centroid-so: 2.998 arcsec [1.94σ]
OotOffset-rm: 2.577 arcsec [2.31σ]
KicOffset-rm: 2.615 arcsec [3.68σ]
OotOffset-st: 0/0/1/1 [2]
KicOffset-st: 0/0/1/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

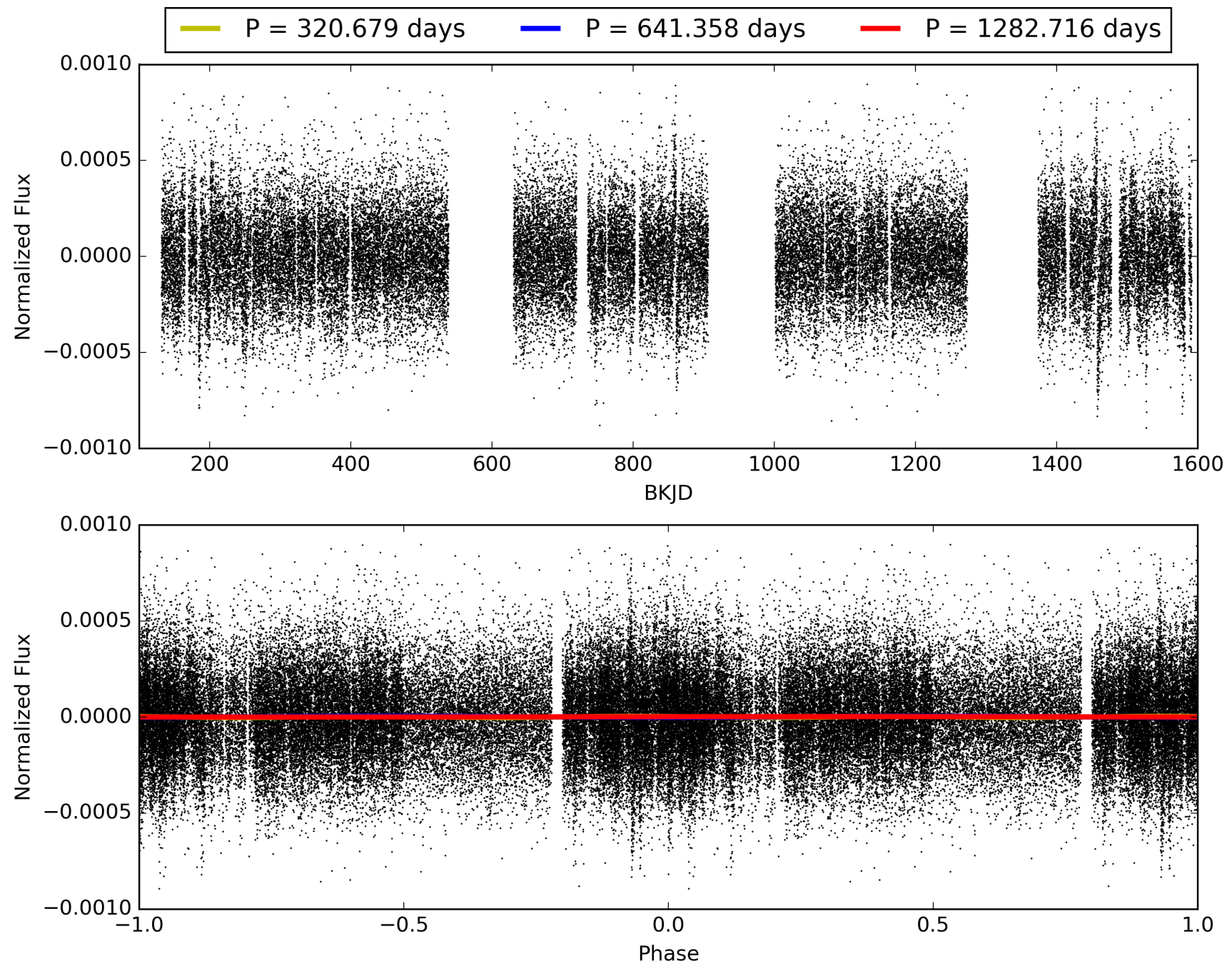
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 19:10:20 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 005200605-01, PDC Light Curves

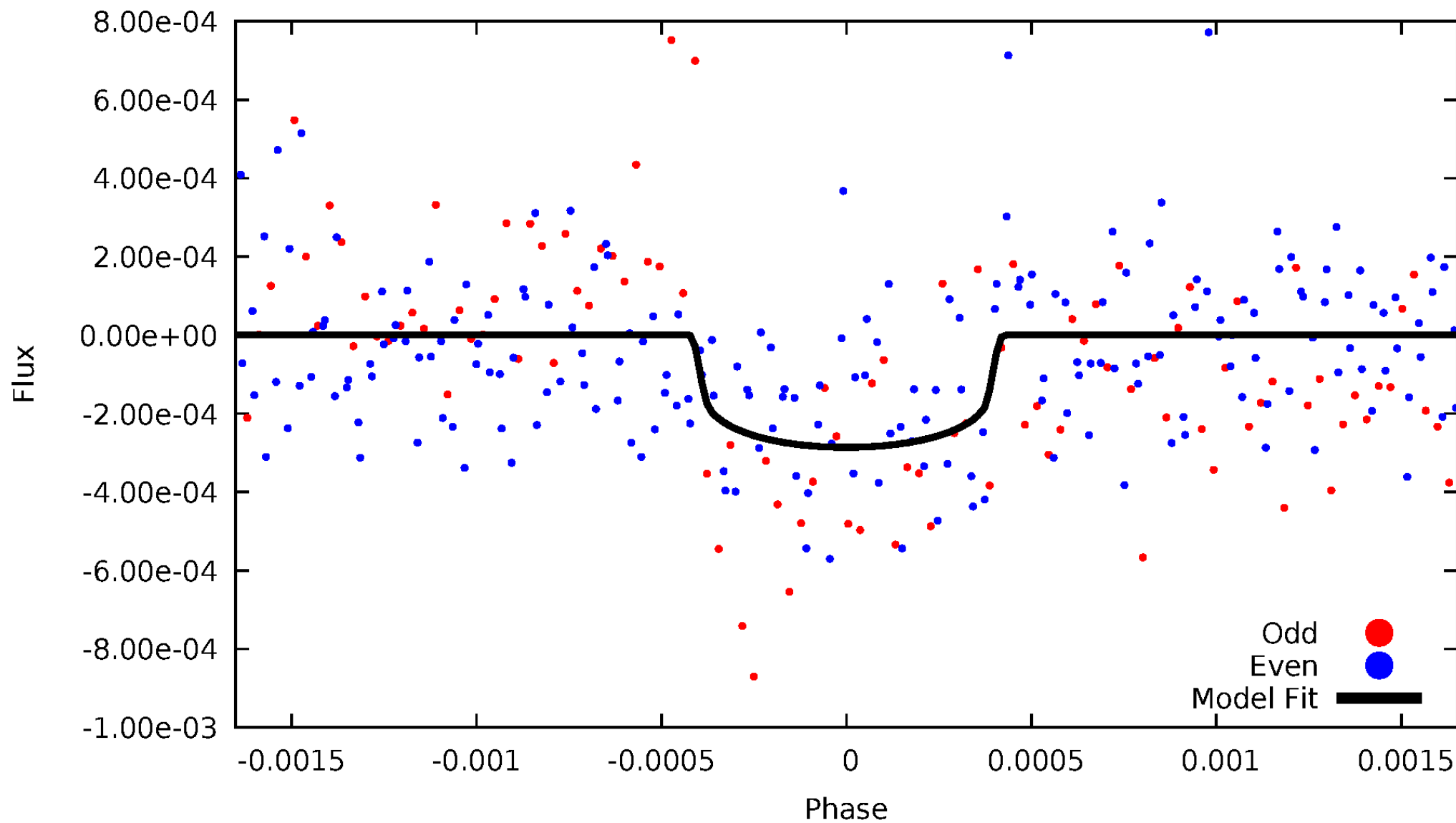


TCE 005200605-01



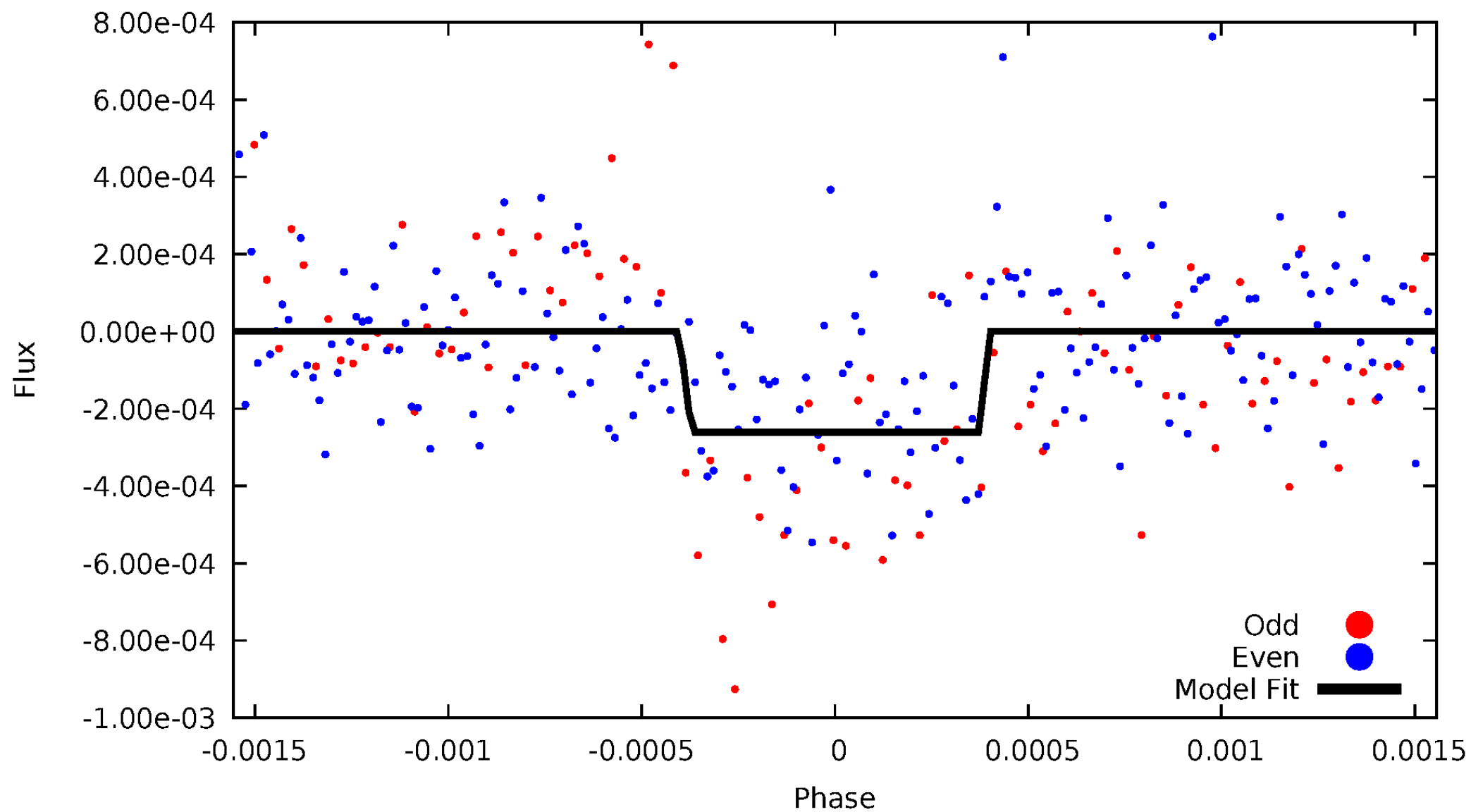
DV Odd/Even

TCE 005200605-01



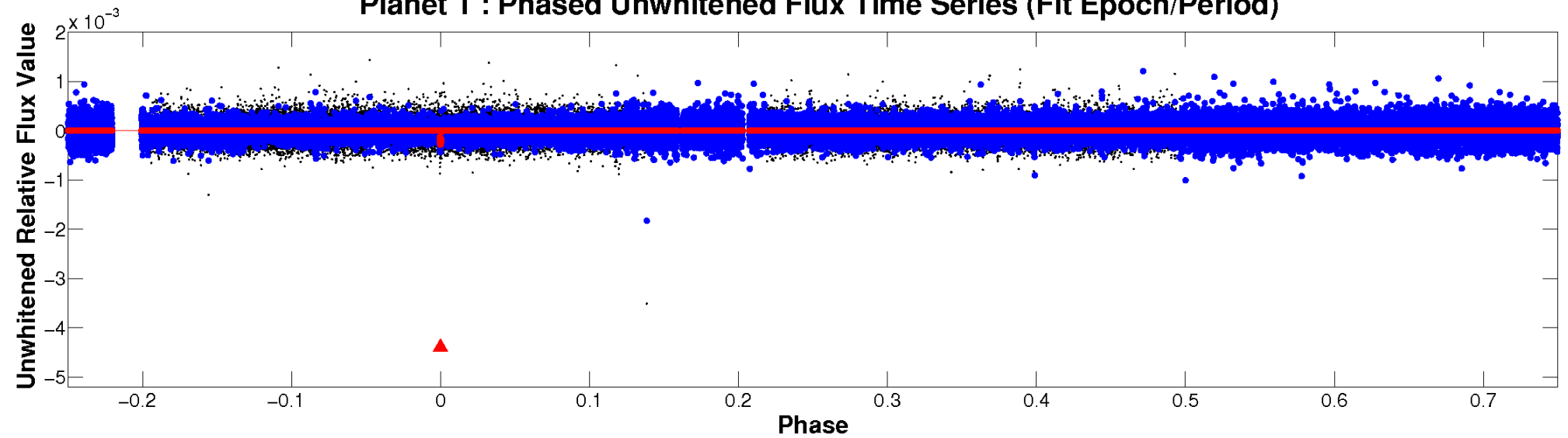
ALT Odd/Even

TCE 005200605-01

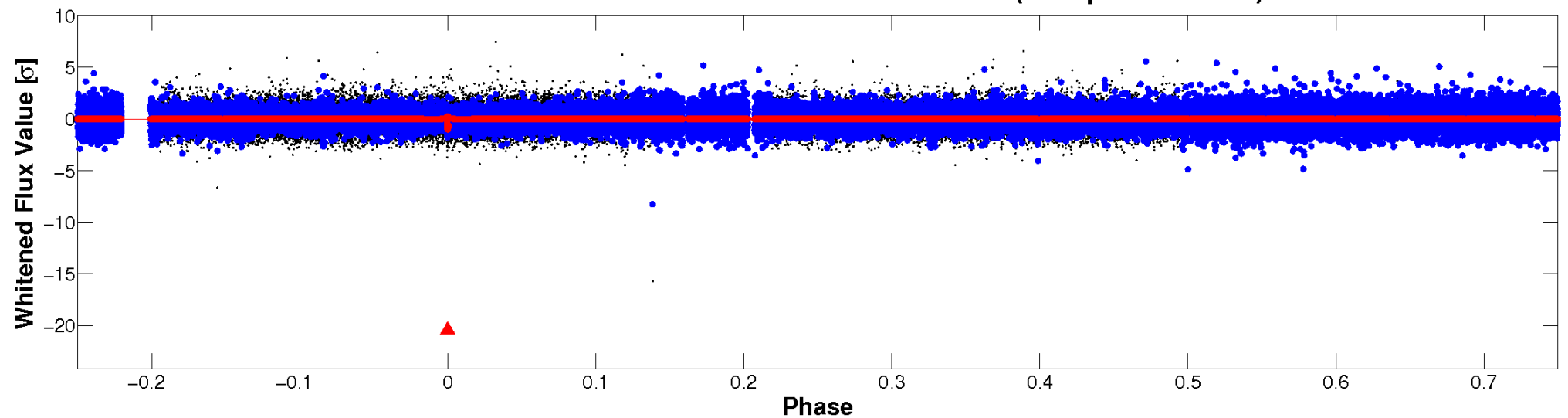


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

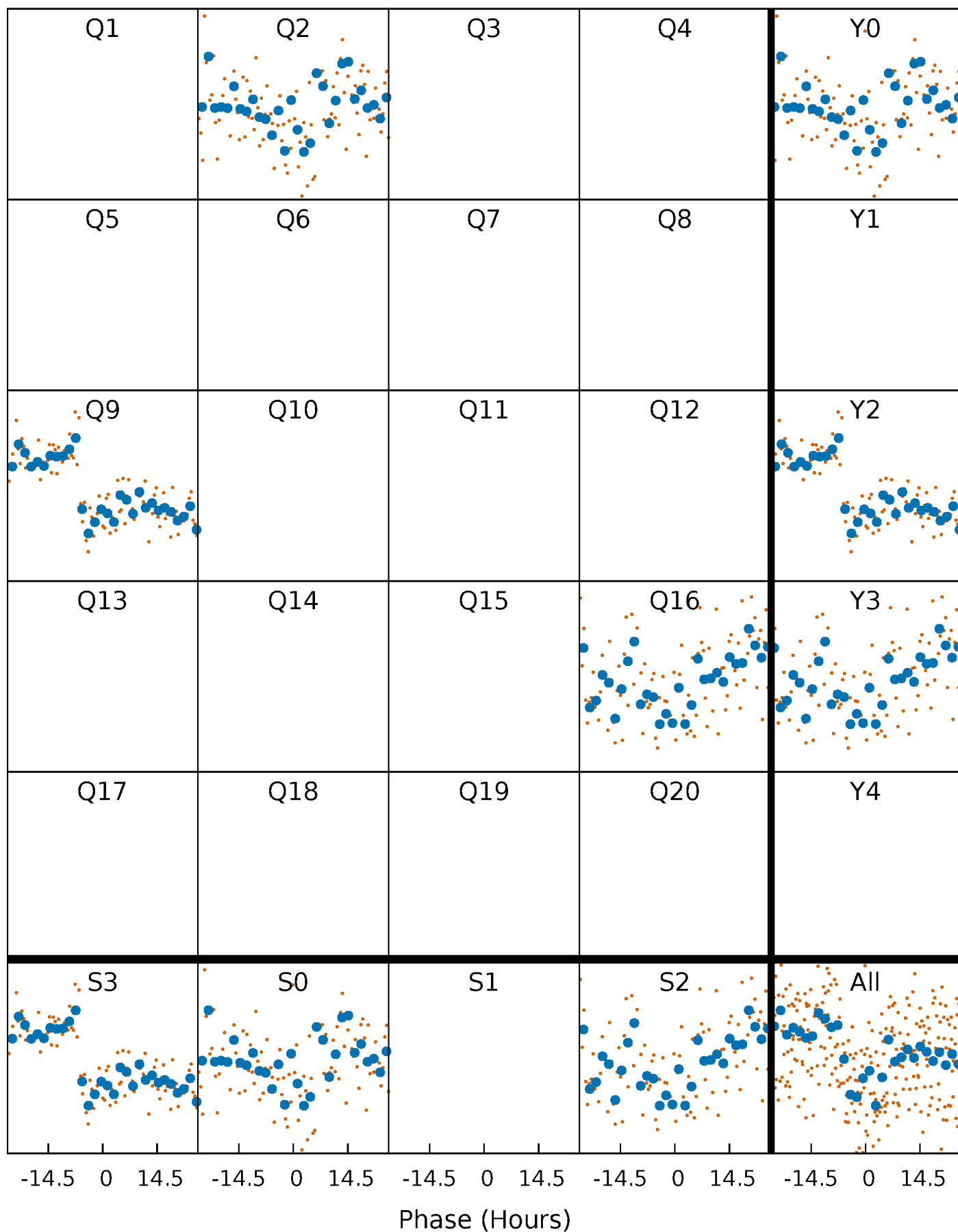


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



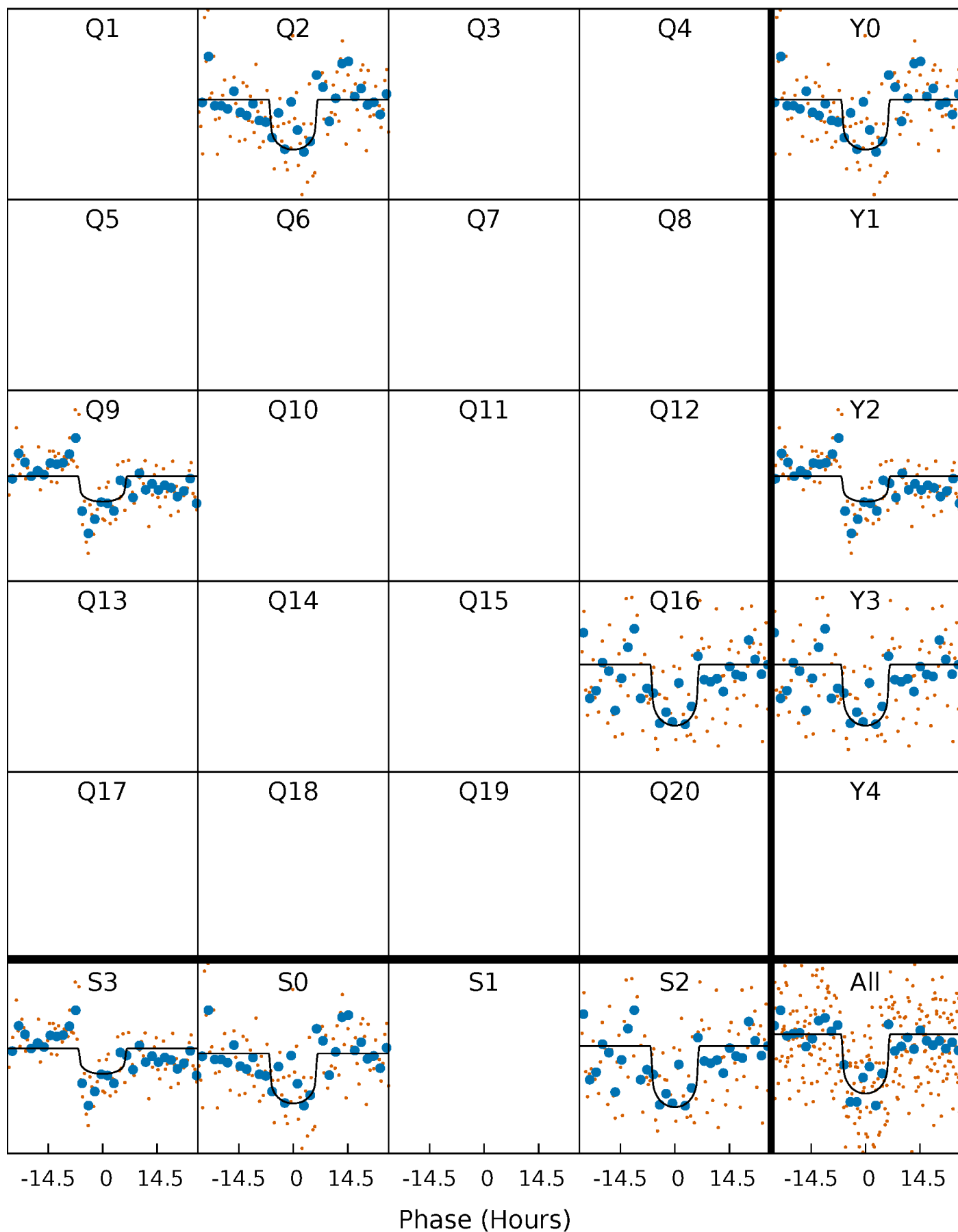
PDC Quarter-Phased Transit Curves

TCE 005200605-01 P=641.358213 Days $T_0=219.486766$ (BKJD)



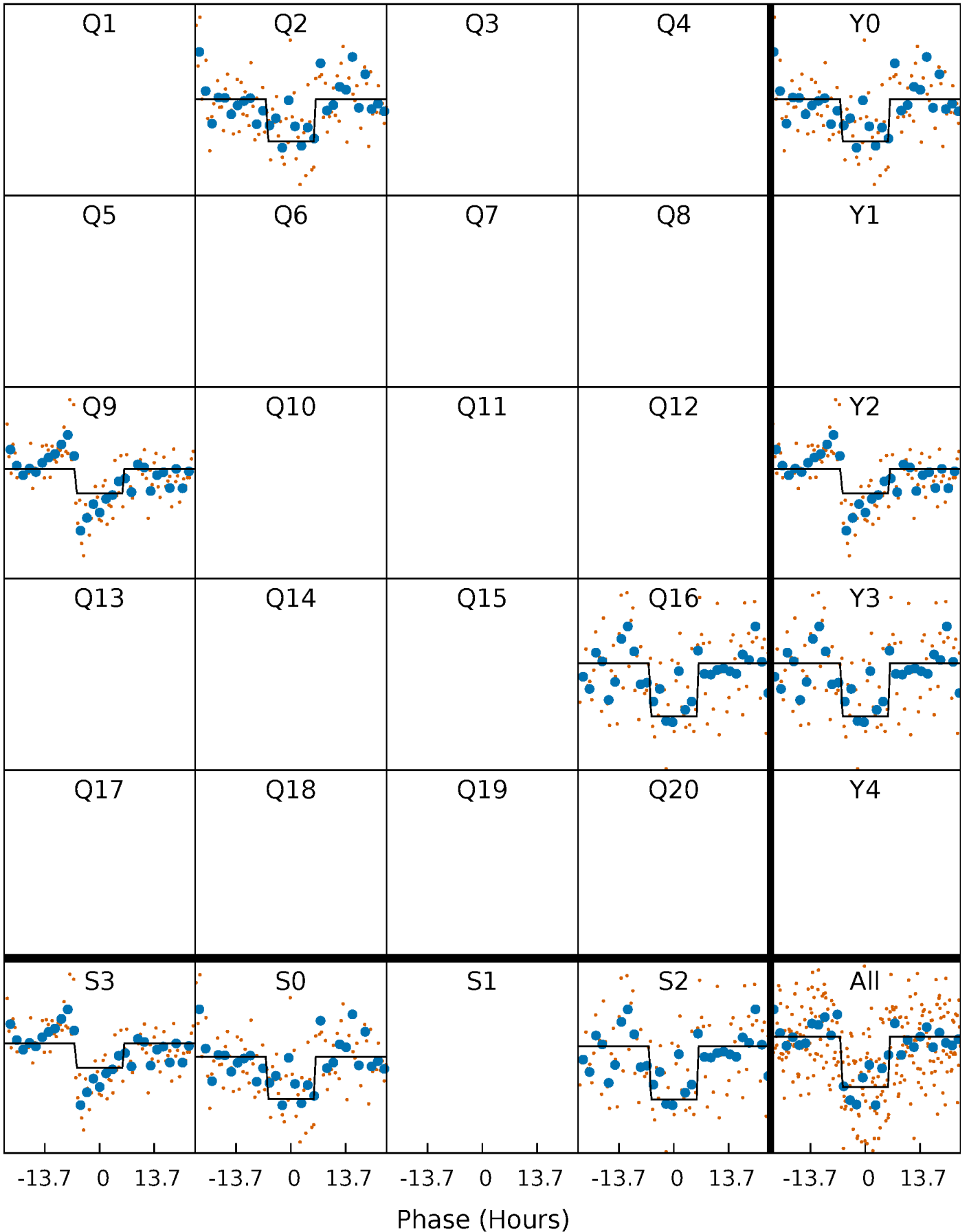
DV Quarter-Phased Transit Curves

TCE 005200605-01 P=641.358213 Days $T_0=219.486766$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

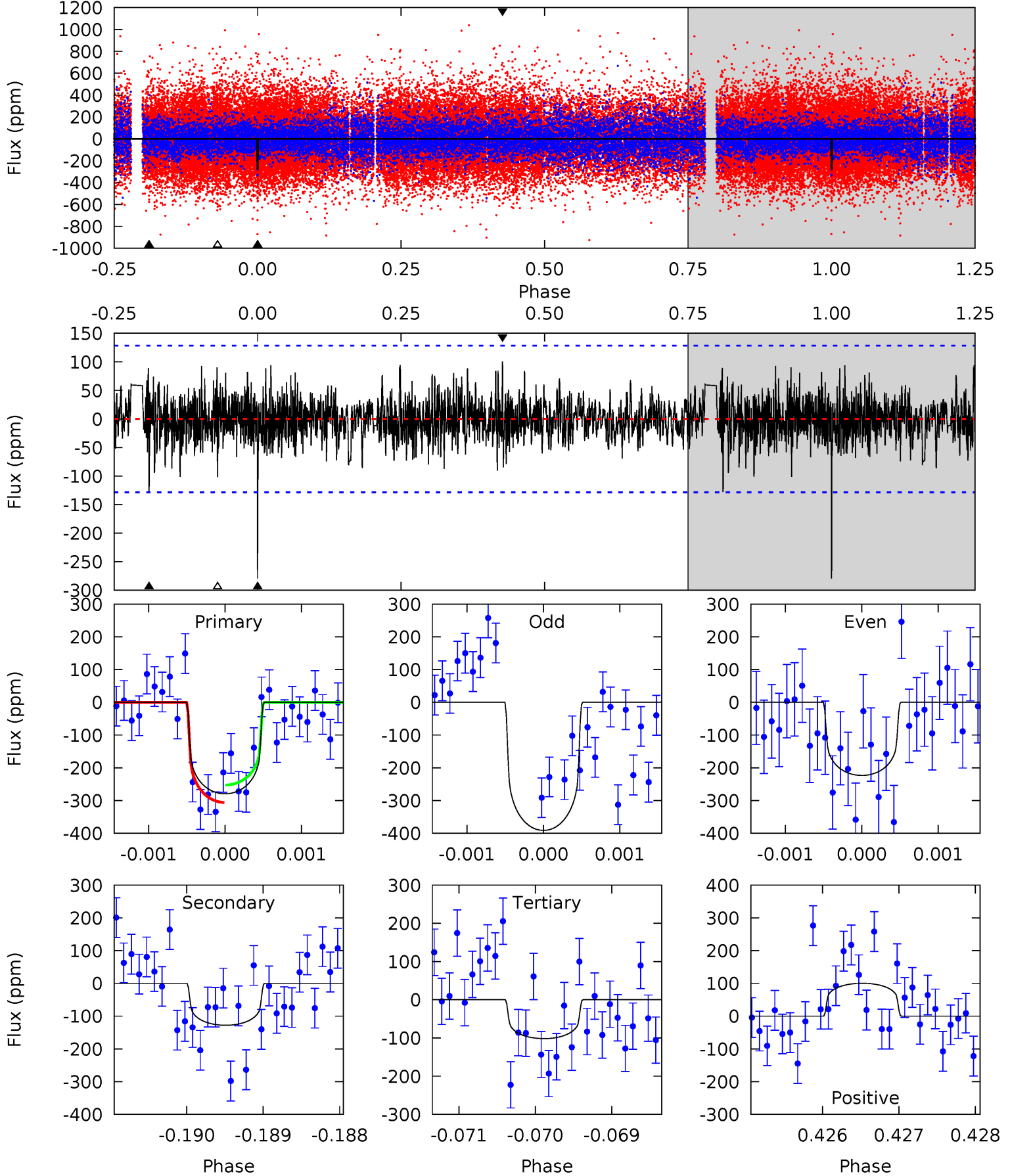
TCE 005200605-01 P=641.361770 Days $T_0=219.488580$ (BKJD)



DV Model-Shift Uniqueness Test

005200605-01, P = 641.358213 Days, E = 219.486766 Days

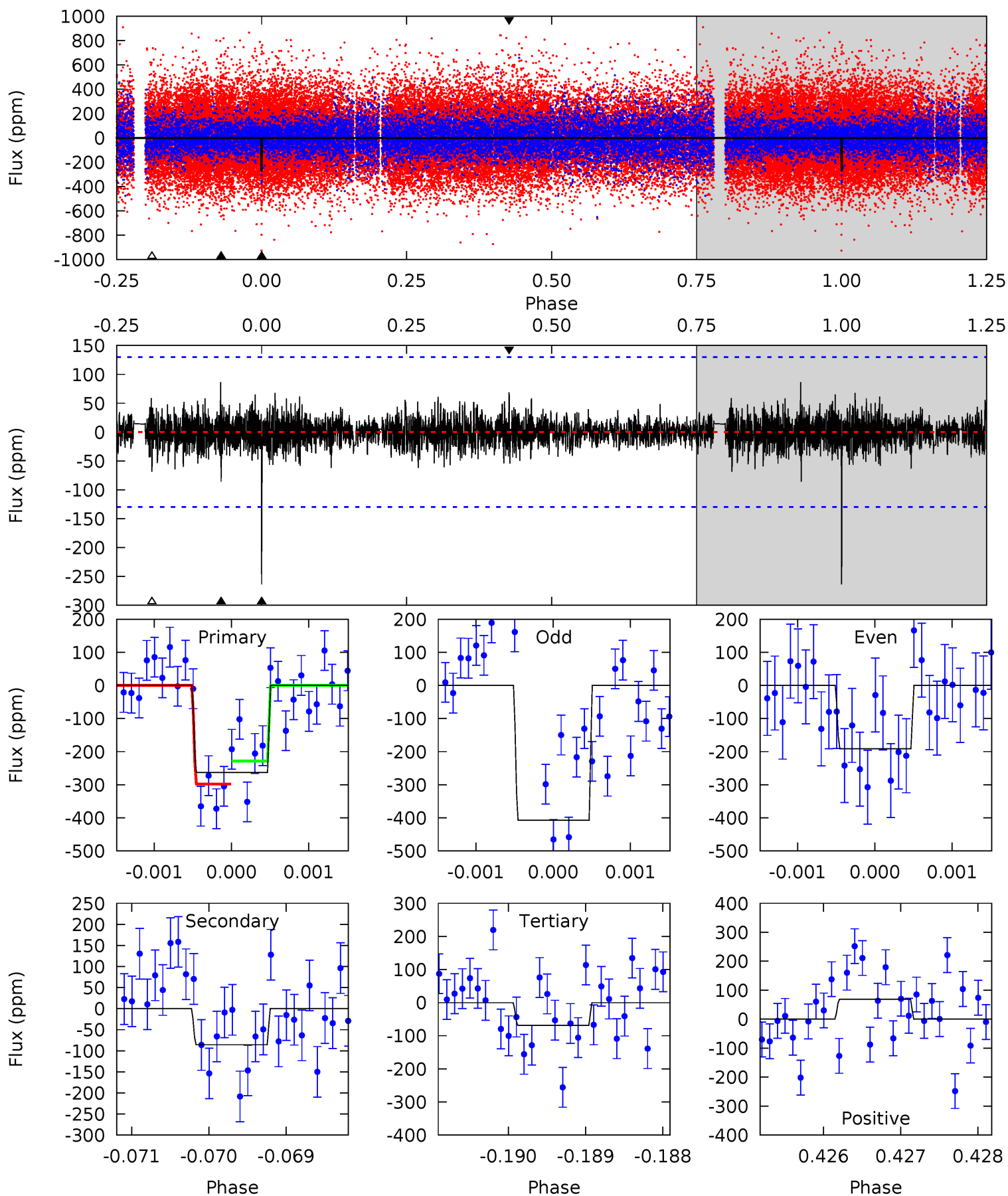
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.9	5.46	4.34	4.29	5.48	3.34	1.21	7.59	7.65	1.12	1.18	3.38	1.22	0.26	1.14



Alt Model-Shift Uniqueness Test

005200605-01, P = 641.361770 Days, E = 219.488580 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.2	3.62	2.90	2.91	5.49	3.35	0.76	8.25	8.25	0.72	0.72	4.31	1.33	0.25	1.47



Stellar Parameters For KIC 005200605

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5395^{+64}_{-97}	$3.340^{+0.176}_{-0.095}$	$-0.620^{+0.100}_{-0.200}$	$4.298^{+0.651}_{-1.210}$	$1.475^{+0.132}_{-0.396}$	$0.026^{+0.026}_{-0.008}$
	+1%/-2%	+5%/-3%	+16%/-32%	+15%/-28%	+9%/-27%	+100%/-31%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 005200605-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-128 ± 23	$7.59^{+4.45}_{-3.93}$	533^{+24}_{-33}	4521^{+1908}_{-670}	3201^{+11457}_{-1875}
Alt.	-86 ± 24	$7.56^{+4.91}_{-4.05}$	532^{+24}_{-34}	4230^{+1588}_{-712}	2160^{+7778}_{-1442}

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

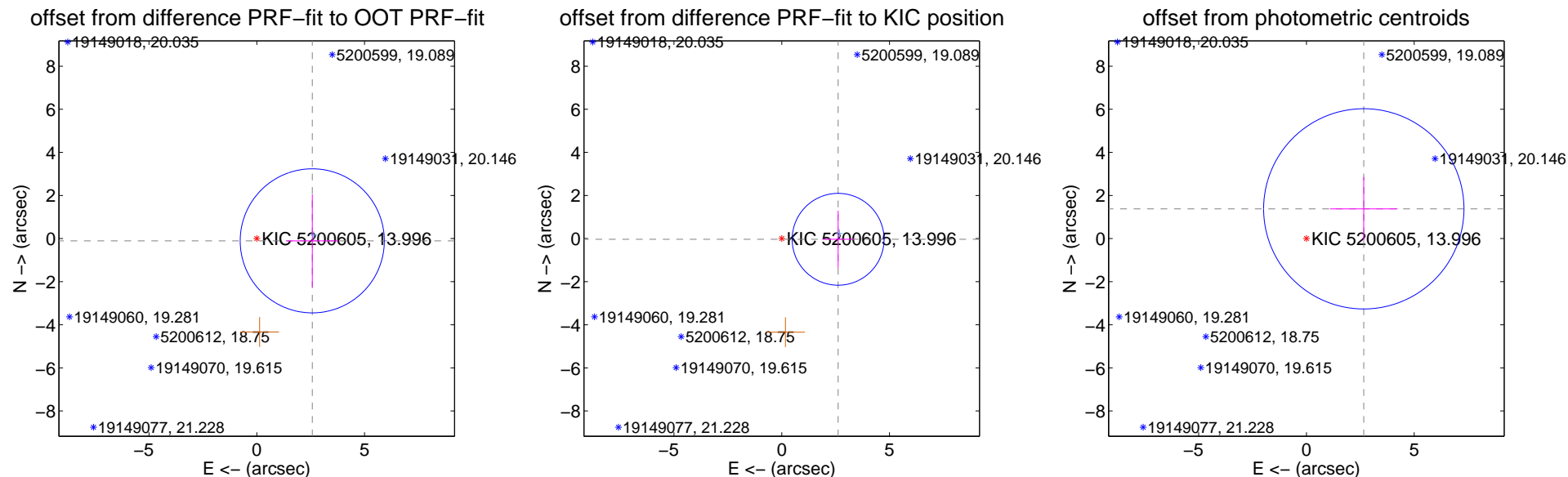
DV Centroid Data

Supplemental centroid analysis for 005200605-01. Kepler magnitude: 14.00. Transit SNR 7.73

There are 1 quarters with good PRF difference image offsets

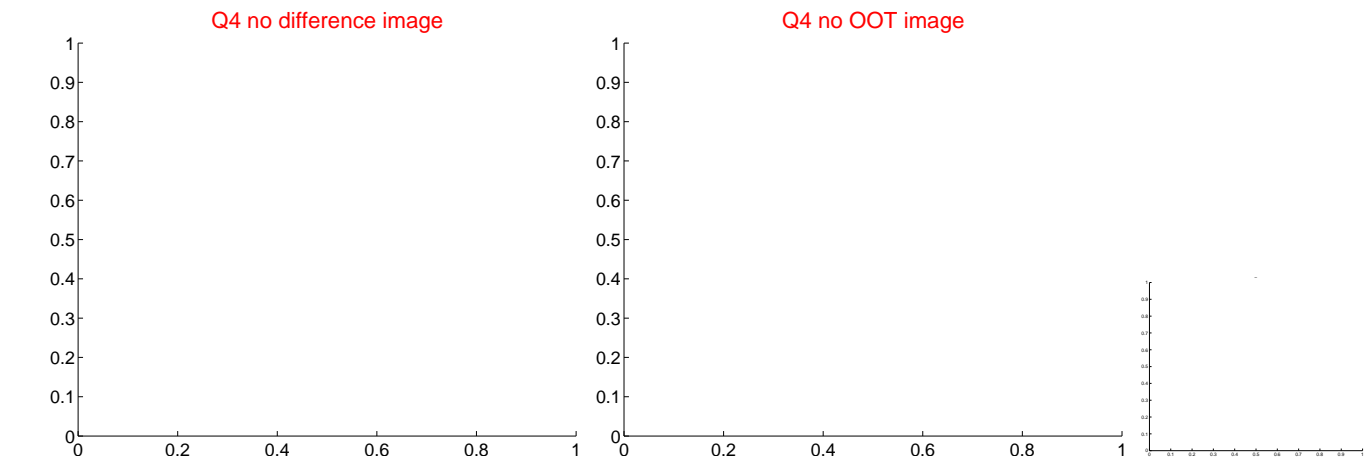
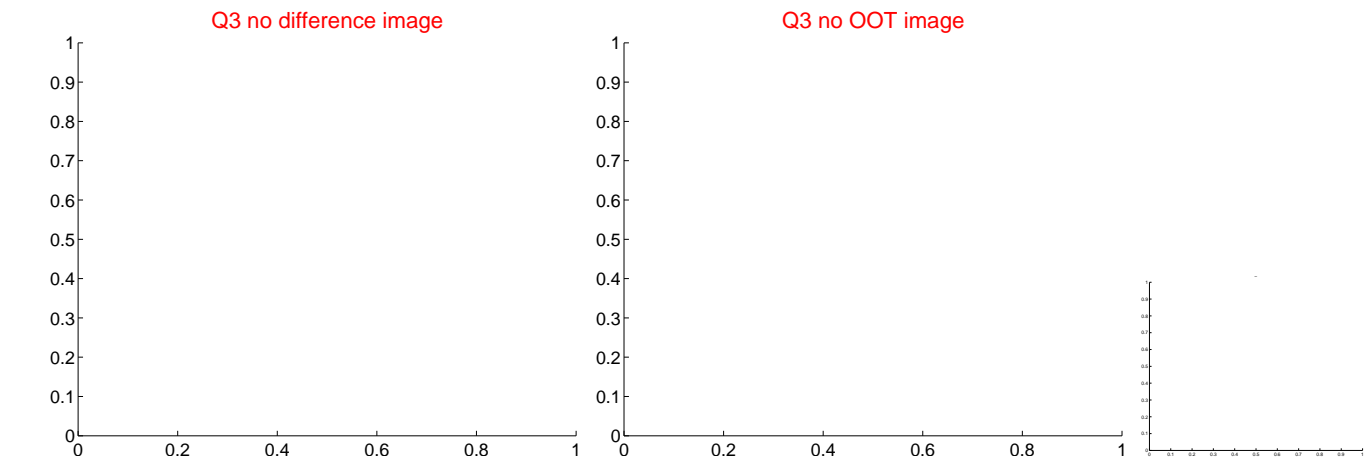
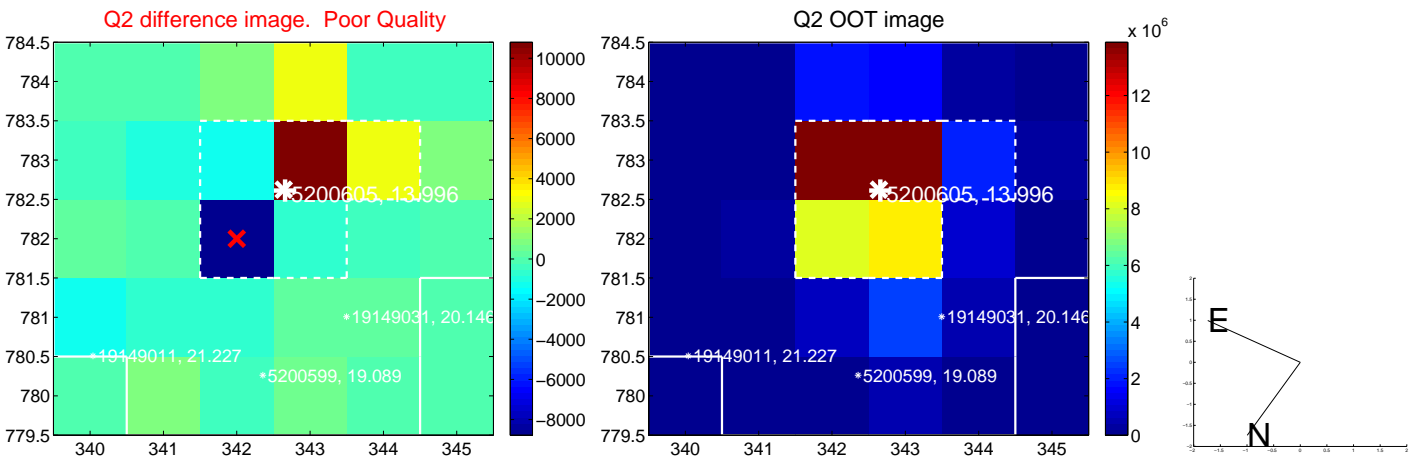
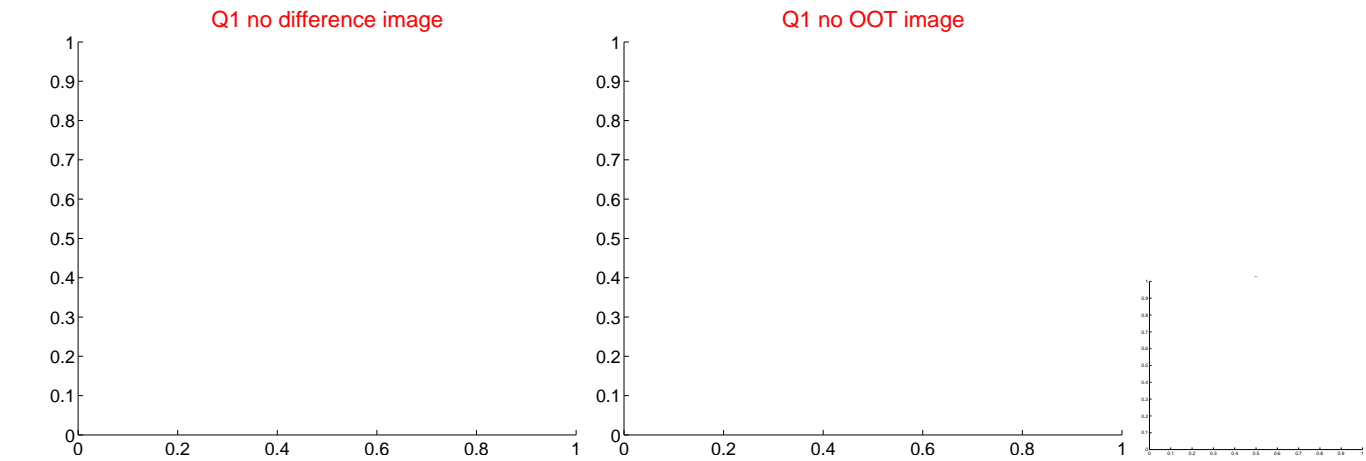
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.577 ± 1.114	2.31	-2.575 ± 1.203	-0.105 ± 2.155
PRF-fit source offset from KIC position	2.615 ± 0.710	3.68	-2.615 ± 0.727	-0.033 ± 1.326
photometric centroid source offset	3.00 ± 1.55	1.94	-2.66 ± 1.57	1.38 ± 1.48



Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

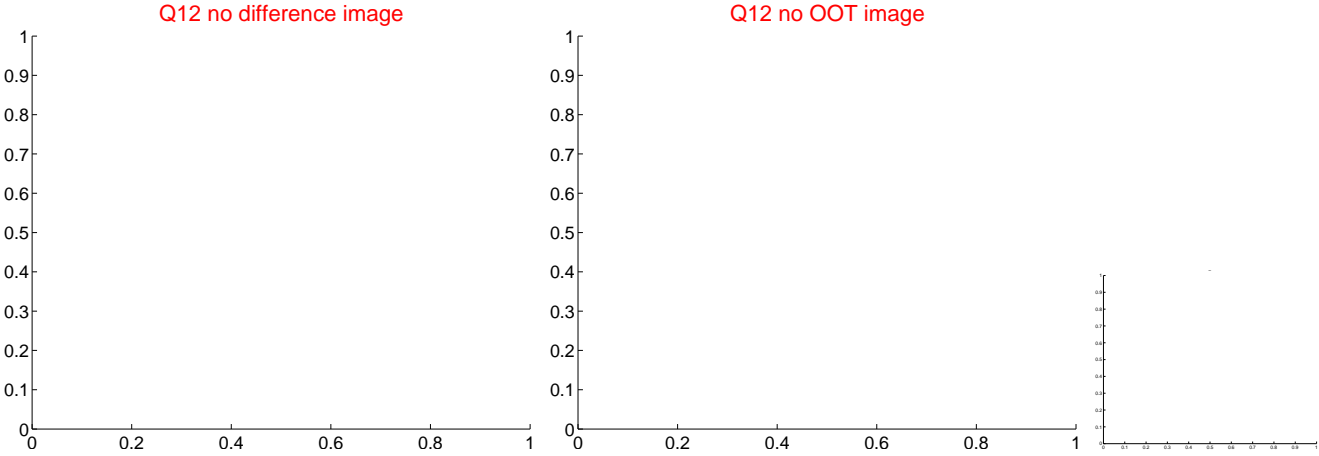
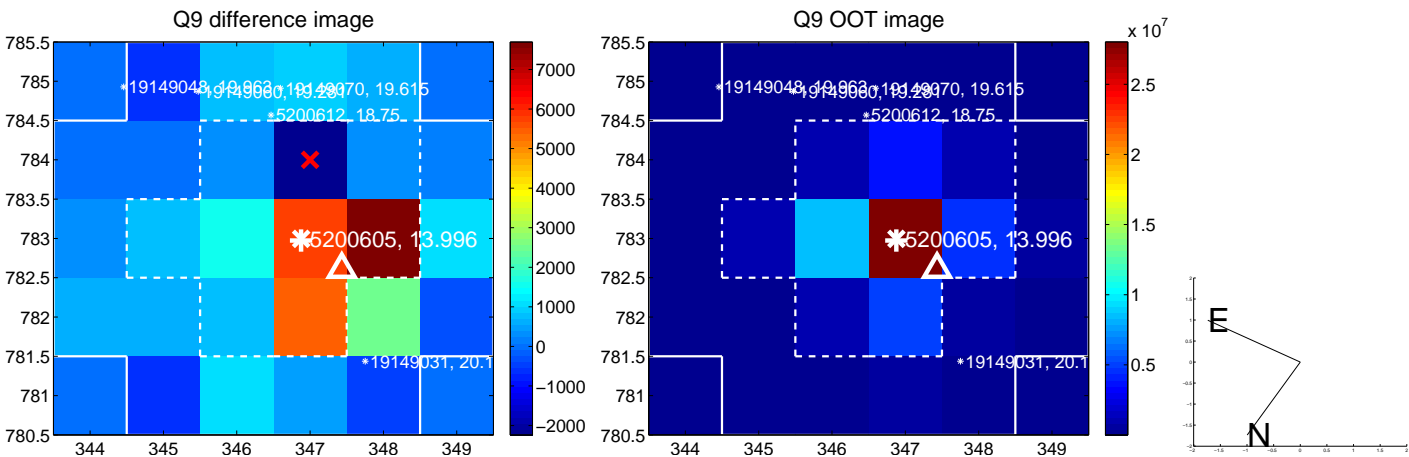
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



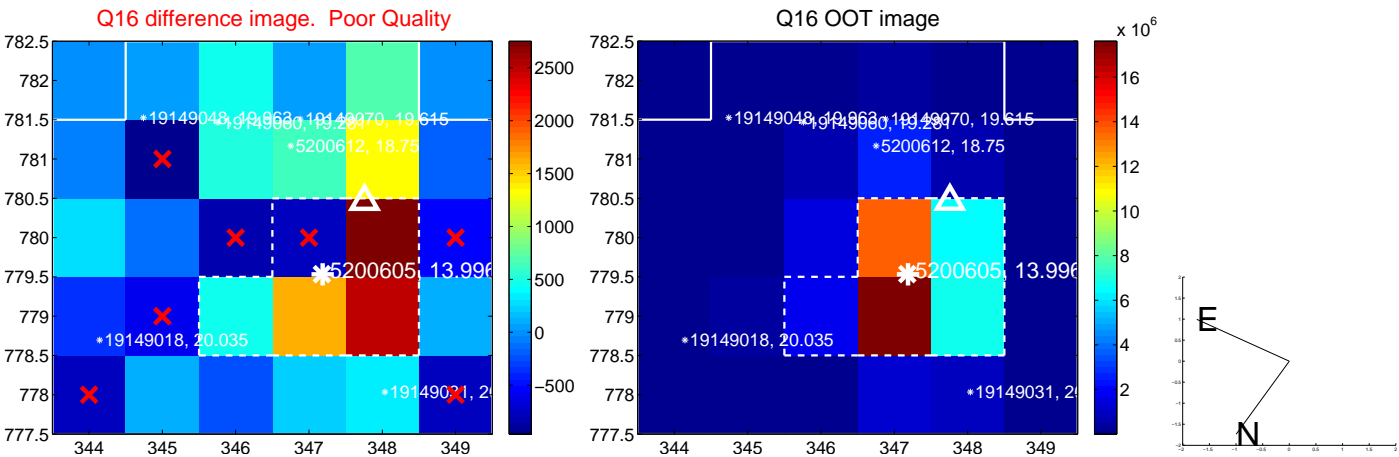
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



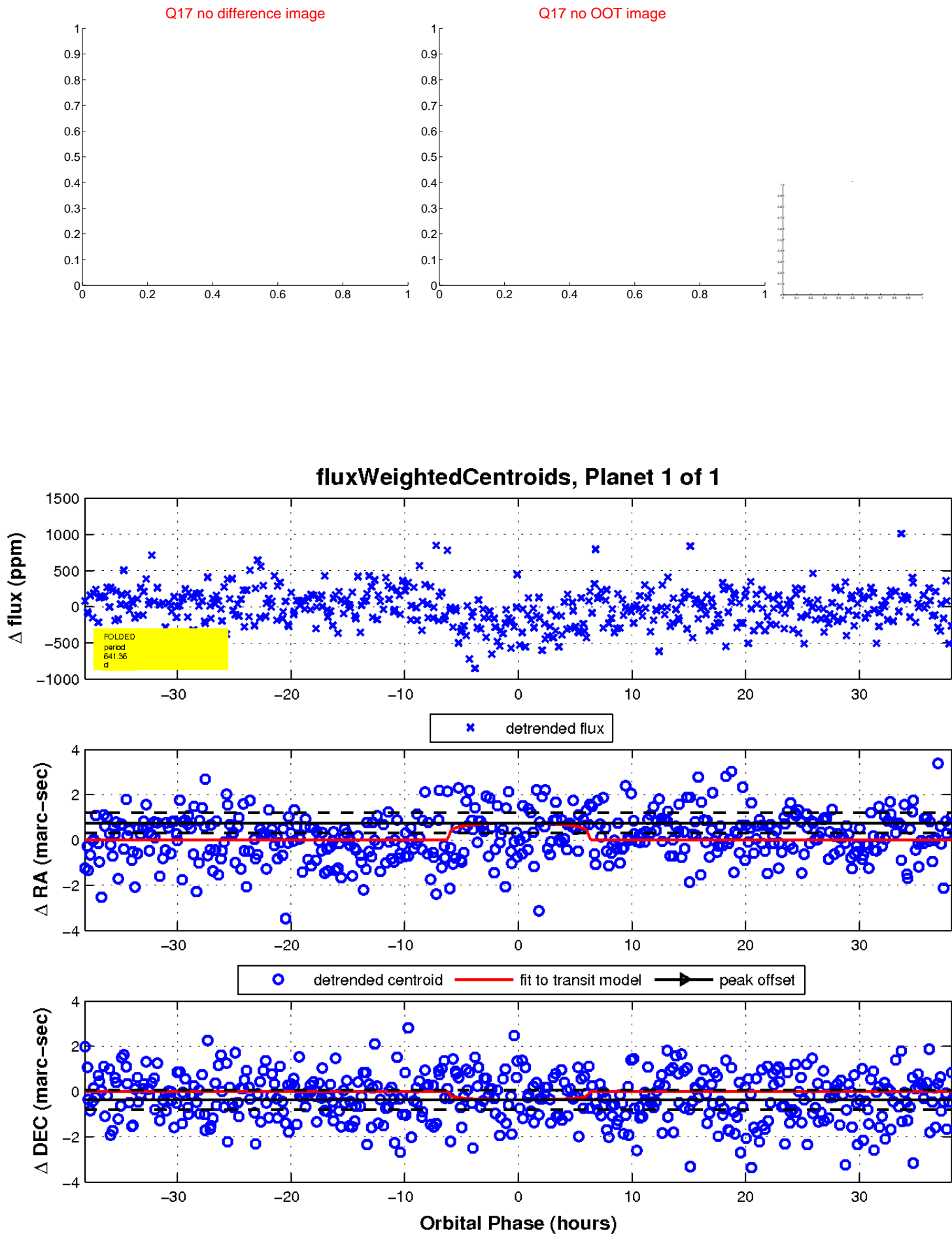
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

